American Farmland Trust

March 7, 2022

Testimony in support of S.B. 243 - An Act Concerning Climate-Smart Agricultural Practices

Senator Cohen, Representative Greska, and other Members of the Environment Committee:

My name is Dr. Emily Cole – I am an advocate for sound farming practices, a soil scientist specializing in carbon sequestration on farmland, a member of CT Farm Bureau, and the New England Regional Deputy Director of American Farmland Trust. Thank you for the opportunity to submit testimony in support S.B. 243- An Act Concerning Climate-Smart Agricultural Practices on behalf of American Farmland Trust. AFT support S.B. 243, because this bill provides mechanisms for financial and technical support that can help farmers harnessing the incredible potential that farmland has in the fight against climate change.

Founded in 1980, American Farmland Trust (AFT) is the only national organization that takes a holistic approach to agriculture, focusing on the land itself, the agricultural practices used on that land, and the farmers and ranchers who do the work. AFT has been a leading voice at the intersection of climate change and agriculture for well over a decade, building upon our extensive history in soil health.

The adoption of climate smart agriculture is a low-cost, ready-to-deploy approach to combat the climate crisis on a meaningful scale. The table below presents estimates of the climate mitigation impact (in tonnes of carbon dioxide equivalent (CO_2e) annually, using COMET-Planner) for Connecticut if all available cropland implemented the conservation practices identified (i.e., 100% adoption). In one single year, transitioning farmland that reports using intensive tillage to no-tillage, mitigates approximately 27,878 tonnes of CO_2e.

Climate Smart Practice	CO_2e (tonnes per yr)
Single Practices	
Cover Cropping	
No cover crop to legume cover crop	21,350
No cover crop to non-legume cover crop	11,168
Nutrient Management	
Replace 20% synthetic N over a 5-yr period with compost (C:N = 25)	45,675
Replace 20% synthetic N over a 5-yr period with dairy manure	18,679
Replace 20% synthetic N a over 5-yr period with chicken broiler manure	8,065
Residue & Tillage	
Intensive tillage to no-tillage	27,878
Reduced tillage to no-tillage	18,347
Combined Practices: Tillage, Cover Crop, Compost, or Nutrient Management	
Intensive tillage to no-till + legume cover crop + compost (C:N =25)	94,902
Intensive tillage to no-till + nonlegume cover crop + compost (C:N =25)	84,720

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Our nation's farmers and ranchers are not only being heavily impacted by climate change, but they are also critical allies in our efforts to address this crisis. Rebuilding soil health is the keystone of enhancing agricultural climate resilience and combating climate change. Healthy soils can absorb more water during heavy rains and retain more water during periods of drought. They also improve yields, yield stability, and long-term farm productivity. But numerous challenges remain that hinder widespread adoption in Connecticut. Increasing the adoption of climate-smart agricultural practices will depend upon there being adequate assistance to help farmers transition their operations. At present, the lack of available Conservation Technical Assistance (CTA) is one of the greatest barriers producers face to successfully adopting and maintaining climate-smart practices. CTA serves many purposes, including outreach, teaching new techniques, and supporting producers in applying for conservation programs.

Many climate-smart practices generate economic benefits to producers by increasing resilience and productivity, or decreasing expensive inputs such as fertilizer, as shown by AFT's Soil Health Case Studies. However, these benefits can take years to become evident, and farmers and ranchers must often pay upfront for new equipment, fencing, or seeds, and engage in a several-year period of "trial and error" as they learn how to implement new practices. This can initially result in reduced yields or other unanticipated challenges. Financial and technical assistance for at least 5 years can provide the assistance necessary to overcome transitional challenges and secure continued practice adoption. Additionally, engaging in climate-smart agricultural practices sometimes require expensive specialized equipment (e.g., no-till drills, roller crimpers). This can present a significant barrier to entry for socially disadvantaged, young, beginning, and small-scale producers. AFT supports S.B. 243 and the prioritization of funding to support socially disadvantaged producers and new farmers.

Though the U.S. Department of Agriculture (USDA) offers financial assistance programs, the cost of farming in Connecticut is high compared to other regions of the U.S. used to inform payment rates of such financial assistance programs. S.B. 243 provides a pathway for the State of Connecticut to support farmers and supplement other financial assistance programs that do not consider the true cost of agriculture in Connecticut.

Thank you for the opportunity to submit testimony in support of S.B. 243 and for your consideration of these comments. Please feel free to reach out to me if you have any questions.

With respect,

Emily J Cole, PhD
New England Deputy Director